

Table 60: List of ARARs
Gulfco Marine Maintenance Superfund Site

ARAR Type	Requirements	Remedial Alternative Considerations
Chemical-Specific	RCRA Hazardous Waste Criteria - 40 CFR 261 Subpart C and Texas Waste Classification Rules - 30 TAC 335 Subchapter R	Waste classification determination (i.e., hazardous or non-hazardous Class 1, 2 or 3) for any wastes managed at an off-site treatment, storage or disposal facility.
	Texas Risk Reduction (TRRP) Protective Concentration Levels (PCLs) - 30 TAC Chapter 350	Specifies criteria for the investigation/remediation of the Site and used to define the extent of contamination. Not used in place of site-specific Baseline Human Health Assessment (BHHRA) and Baseline Ecological Risk Assessment (BERA) to establish site-specific risk levels (and Remedial Action Objectives) for those areas of the Site that pose risk to human health or the environment.
	Fish-Only Human Health Criteria Texas Surface Water Quality Standards (TSWQS) - 30 TAC §307.6(d)(2)(B)	Specifies criteria for surface water concentrations in the Intracoastal Waterway adjacent to the Site in the event affected groundwater discharges to the Intracoastal Waterway.
Location-Specific	Wetlands - Clean Water Act Section 404(b)(1) promulgated as 40 CFR 230.10 and 40 CFR 6.302(a), Executive Order 11990	<ul style="list-style-type: none"> • 40 CFR 230.10 - Prohibits discharge of dredged or fill material to wetlands, subject to consideration of practicable alternatives and the use of mitigation measures. • 40 CFR 6.302(a), Executive Order 11990 - Requires that any actions performed within wetland areas minimize the destruction, loss or degradation of wetlands.
	Critical Habitat for Endangered or Threatened Species - Fish and Wildlife Coordination Act, Endangered Species Act, 40 CFR §6.302(h), 40 CFR §230.30, 50 CFR Part 402 and 31 TAC §501.23(a)	<p>Governs the protection of critical habitat for endangered or threatened species via the following regulations:</p> <ul style="list-style-type: none"> • Endangered Species Act - Prohibits federal agencies' programs (e.g., CERCLA) from jeopardizing threatened or endangered species or adversely modifying habitats essential to their survival. • 40 CFR §6.302(h) - Responsible party must identify designated endangered or threatened species or their habitat that may be affected by the remedial action. • 40 CFR §230.30 and 50 CFR Part 402 - Formal consultation with the United States Fish and Wildlife Services (USFWS), Texas Parks and Wildlife Department (TPWD) and the National Marine Fisheries Service (NMFS) must be undertaken if a listed species or their habitat may be affected by a remedial action. If the consultation reveals that the activity may jeopardize a listed species or habitat, mitigation measures need to be considered. • 31 TAC §501.23(a)(7)(A) - Prohibits development in critical areas if the activity will jeopardize the continued existence of endangered or threatened species or will result in the destruction or adverse modification of their habitat. Also specifies compensatory mitigation.

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Location-Specific (cont'd.)	Coastal Zones - Coastal Zone Management Act, 15 CFR Part 923 and 31 TAC Chapter 501	<ul style="list-style-type: none"> • Coastal Zone Management Act - Requires the development and implementations of state programs, in conformity with EPA guidance, to manage the land and water resources of the coastal zone, including ecological, cultural, historic and aesthetic values. • 15 CFR Part 923 - Provides criteria for National Oceanic and Atmospheric Administration (NOAA) approval of state programs. • 31 TAC Chapter 501 - Prohibits development in critical areas if significant degradation will occur, including the threatening of an endangered or threatened species or its habitat, violation of any surface water standards or toxic effluent standards, adversely effecting human health or welfare (including effects on fish, shellfish, wildlife and the consumption of fish and wildlife), adversely effecting aquatic ecosystems, or adversely effecting generally accepted recreational aesthetics or economic value of the critical area.
	Floodplains - 40 CFR 264.18(b) and 40 CFR 6.302(b), Executive Order 11988	<ul style="list-style-type: none"> • 40 CFR 264.18(b) - Remedial alternatives involving on-site treatment, storage or disposal facilities for RCRA hazardous waste at the Site are required to be designed, constructed, operated and maintained to prevent washout of hazardous waste by the 100-year flood. • 40 CFR 6.302(b), Executive Order 11988 - Any actions performed within the floodplain must avoid adverse effects, minimize potential harm and restore and preserve natural and beneficial values of the floodplain.
Action-Specific	RCRA Unit Specific Standards - 40 CFR 264.1(g), 40 CFR 260.10 and Clean Water Act Section 402 or 307(b)	<p>A potential groundwater treatment system at the Site would not be subject to the unit-specific RCRA design and operating standards for units that treat hazardous wastes because it is a wastewater treatment unit which is exempt under 40 CFR 264.1(g). A wastewater treatment unit is defined by 40 CFR 260.10 as a "device which: (1) is part of a wastewater treatment facility this is subject to regulation under either Section 402 or 307(b) of the Clean Water Act; (2) receives and treats or stores an influent wastewater that is a hazardous waste...; and (3) meets the definition of a tank system.</p> <p>A potential groundwater treatment system at the Site meets these criteria since the system would: (1) discharge to the City of Freeport POTW through an industrial discharge permit and would be subject to regulation under the Clean Water Act (i.e., through the industrial pre-treatment discharge limitations established by the POTW); (2) the groundwater treatment system would be treating an influent hazardous wastewater if the groundwater were classified as a hazardous waste due to the toxicity characteristic for one or more contaminants; and (3) the treatment system would meet the definition of a tank in 40 CFR 260.10: "a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support."</p>

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Action-Specific (cont'd.)	<p align="center">Air Emissions - 40 CFR Part 60, 40 CFR Parts 61 and 63, 40 CFR Part 264, Subparts AA, BB and CC/30 TAC 335.152(a)(17) & (18) and 30 TAC Chapter 106, Subchapter X</p>	<p>A potential groundwater treatment system would use an air stripper to remove volatile organic chemicals (VOCs) from the groundwater. The air emissions from this process may be subject to Federal and state air quality regulations. The following regulations were considered:</p> <ul style="list-style-type: none"> • New Source Performance Standards (NSPS) (40 CFR Part 60) - Groundwater treatment system not regulated by NSPS; • National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR Parts 61 and 63) - Groundwater treatment system not regulated by NESHAPs; • RCRA Air Emissions Requirements (40 CFR Part 264, Subparts AA, BB, and CC/30 TAC 335.152(a)(17) & (18)) - Groundwater treatment system exempt from RCRA; • Control of Air Pollution from Volatile Organic Compounds (30 TAC Chapter 115) - Groundwater treatment system likely exempt from the control and monitoring requirements of these regulations due to the relatively small size of the equipment and anticipated low emission rates (based on groundwater extraction/treatment flow rate and VOC concentrations in groundwater). Specifically, storage tanks with less than 1,000 gallons capacity are exempt from control requirements under §115.112(c)(1), Table I(b) and vent gas streams having a combined weight of VOCs less than or equal to 100 pounds in any continuous 24-hour period are exempt from control requirements of §115.121(a)(1), (see §115.127(a)(2)(A)). • Permits by Rule – Waste Processes and Remediation (30 TAC Chapter 106, Subchapter X) - 30 TAC §106.533 provides State Permit By Rule regulations for remediation processes that could apply to a potential groundwater treatment system. Emission rate limits (in lbs/hr) are described by compounds that are required to qualify for permit by rule and specifies the performance requirements for emissions control devices under a permit by rule.
	<p align="center">Effluent Discharge - City of Freeport Code of Ordinances, Chapter 51</p>	<p>The effluent from a potential groundwater extraction and treatment system could be discharged to the City of Freeport POTW. The City's industrial discharge rates and ordinances would apply to this discharge. As such an industrial wastewater discharge permit is required by the City as discharge limits, monitoring and reporting would be subject to City standards described in Chapter 51 of the City of Freeport Code of Ordinances.</p>

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Action-Specific (cont'd.)	Landfill Cap Construction - 30 TAC §330.457 (3)(b)	<p>The former surface impoundments were closed under a Texas Water Commission (TWC)-approved plan in 1982. Requirements that may potentially be considered relevant and appropriate to the existing cap include 30 TAC §330.457 (3)(b) which requires Class I industrial solid waste "be covered with a four-foot layer of compacted clay-rich soil", which is identified as having a coefficient of permeability no greater than 1×10^{-7} cm/sec. The TWC-approved closure plan implemented in 1982 provided for a clay thickness of three feet. Soil borings drilled through the cap during the RI indicated clay thicknesses ranging from 2.5 feet to over 3.5 feet. Maintenance activities to be implemented as part of the O&M plan to be developed for the cap will add another 0.5 feet of clay to the cap, thus assuring a cap thickness of at least 3.0 feet and, in some instances, more than 4.0 feet. As detailed in the RI Report, laboratory-measured hydraulic conductivities for the existing cap material ranged from 5.0×10^{-9} cm/sec to 3.5×10^{-8} cm/sec. These values are approximately one-third or less of the 1×10^{-7} cm/sec value specified in §330.457(3)(b), thus indicating that the three-foot thickness of the existing cap can be considered functionally equivalent to a four-foot thick cap constructed of clay with 1×10^{-7} cm/sec hydraulic conductivity.</p>